

IN THE CLAIMS:

Claims 1 – 26 and 50 – 52 were previously cancelled. Claims 27, 34, 35 and 43 have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of Claims:

1.-26. (Cancelled)

27. (Currently amended) A semiconductor wafer having an active surface and a ~~backside~~ back side surface and including a plurality of semiconductor dice formed thereon, wherein:
the active surface includes integrated circuitry thereon;
the ~~backside~~ back side surface is in a back-ground state;
a solid material extends over and is bonded to the ~~backside~~ back side surface; and
an interface between the ~~backside~~ back side surface and the solid material has a mean surface roughness factor R_a of between about 5% and about 40% of a mean thickness of the semiconductor wafer.

28. (Original) The semiconductor wafer of claim 27, wherein semiconductor material of the semiconductor wafer comprises one of silicon, gallium arsenide, germanium and indium phosphide.

29. (Original) The semiconductor wafer of claim 27, wherein the interface has a mean surface roughness factor R_a between about 2 μm and about 15 μm .

30. (Original) The semiconductor wafer of claim 27, wherein the solid material comprises a polymer.

31. (Original) The semiconductor wafer of claim 27, wherein the solid material includes at least one of the polymer groups comprising epoxies, acrylics, silicones, urethanes, siloxanes and Parylenes™.

32. (Original) The semiconductor wafer of claim 27, wherein the solid material comprises one of a thermoset cross-linkable polymer, a UV cross-linkable polymer and a two-part epoxy.

33. (Original) The semiconductor wafer of claim 27, wherein the solid material comprises a Parylene™ polymer.

34. (Currently amended) The semiconductor wafer of claim 27, wherein the solid material has a mean thickness of about 100 μm or less over a highest topographic feature on the ~~backside~~ back side surface.

35. (Currently amended) The semiconductor wafer of claim 27, wherein the solid material has a mean thickness of about 10 μm or less over a highest topographic feature on the ~~backside~~ back side surface.

36. (Original) The semiconductor wafer of claim 27, wherein the solid material has a generally planar exposed surface.

37. (Original) The semiconductor wafer of claim 27, wherein the solid material comprises an ionic barrier.

38. (Original) The semiconductor wafer of claim 27, wherein the semiconductor wafer has a thickness of about 4 mils or less.

39. (Original) The semiconductor wafer of claim 27, wherein the semiconductor wafer has a thickness of about 2 mils or less.

40. (Original) The semiconductor wafer of claim 27, wherein the semiconductor wafer has a nominal diameter of at least about 200 mm (about 8 inches).

41. (Original) The semiconductor wafer of claim 27, wherein the semiconductor wafer has a nominal diameter of at least about 300 mm (about 12 inches).

42. (Original) The semiconductor wafer of claim 27, wherein material of the semiconductor wafer is in a state of compression.

43. (Currently amended) A semiconductor package, comprising:
a die of semiconductor material having an active surface and a ~~backside~~ back side surface;
integrated circuitry on the active surface;
wherein the ~~backside~~ back side surface is in a roughly back-ground state and includes a solid material extending thereover and bonded thereto;
a protective material encapsulating at least a portion of the die and the solid material extending over the ~~backside~~ back side surface; and
a plurality of conductive terminals exposed through the protective material on a surface of the package;
wherein an interface between the ~~backside~~ back side surface and the solid material has a mean surface roughness factor R_a of between about 5% and about 40% of the mean thickness of the die.

44. (Original) The package of claim 43, wherein the interface has a mean surface roughness factor R_a of between about 2 μm and about 15 μm .
45. (Original) The package of claim 43, wherein the solid material comprises a polymer.
46. (Original) The package of claim 43, wherein the solid material includes at least one of the polymer groups comprising epoxies, acrylics, silicones, urethanes, siloxanes and Parylenes™.
47. (Original) The package of claim 43, wherein the solid material comprises one of a thermoset cross-linkable polymer, a UV cross-linkable polymer and a two-part epoxy.
48. (Original) The package of claim 43, wherein the solid material comprises a Parylene™ polymer.
49. (Original) The package of claim 43, wherein the semiconductor material of the die is in a state of compression.
- 50.-52. (Cancelled)